

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 58-027CRY2

Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity	Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity
Bi	7440-69-9	100 µg/mL	100 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	101 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	101 µg/mL	3120a*	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	101 µg/mL	3144*	Rh(NO ₃) ₃ -H ₂ O	99.99+
In	7440-74-6	100 µg/mL	101 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	101 µg/mL	3148a*	Sc ₂ O ₃	99.99+
Li ^e	7439-93-2	100 µg/mL	101 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	101 µg/mL	3157a*	Tb ₄ O ₇	99.99+

* - indicates NIST SRM

† - indicates CRM (when NIST SRM is not available)

Purity grades:

Starting Materials: Shown above

Matrix:

 10% HNO₃: HNO₃ (CAS No. 7697-37-2) high purity grade

Traceability:

This standard has been produced gravimetrically and volumetrically using ISO 9001 quality procedures. Agilent ICP / ICP-MS Spectrometer was used to determine the concentration of the main elements via NIST SRMs shown above, as well as the impurities. Other reference standards used: 55-209CR, 57-198CR, 57-135CR.

Trace Metallic Impurities in the Actual Solution, in µg/L, via Agilent ICP-MS Analysis, results are accurate to ±10%:

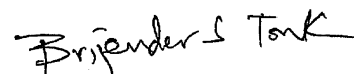
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.6	Co	<0.2	Hf	0.3	Nb	<0.2	Ru	<0.3	Ti	<0.7
Al	9	Cr	<2	Hg	<0.8	Nd	<0.07	Sb	<0.3	Tl	0.4
As	7	Cs	0.7	Ho	0.04	Ni	0.9	Se	<1	Tm	0.07
Au	<0.3	Cu	0.4	Ir	8	P	<200	Si	<200	U	<0.05
B	10	Dy	<0.05	K	20	Pb	1	Sm	<0.05	V	<0.2
Ba	2	Er	<0.05	La	0.1	Pd	<0.2	Sn	0.4	W	<0.4
Be	<0.1	Eu	0.06	Mg	7	Pr	0.03	Sr	3	Y	0.7
Ca	90	Fe	10	Mn	<2	Pt	<0.2	Ta	<0.4	Yb	<0.6
Cd	<0.2	Ga	<0.4	Mo	<5	Rb	0.4	Te	<0.9	Zn	10
Ce	<0.09	Gd	0.1	Na	<200	Re	<0.04	Th	0.3	Zr	3

Balances are calibrated regularly with weight sets traceable to NIST.

Agilent reference standards are guaranteed stable and accurate to ±0.5% of measured analyte concentration. This uncertainty is at 95% confidence interval, a coverage factor of 2. For these solutions we use the highest purity acids applicable, 18 megohm double deionized water and acid-leached, triple rinsed bottles. All glassware used is class A. This standard was manufactured following the guidelines set forth under ISO 17025 and ISO 17034 regulations.

Date of release: January 31, 2022

Date of expiration: July 31, 2023



 QC Coordinator